

FIG. 1
(PRIOR ART)

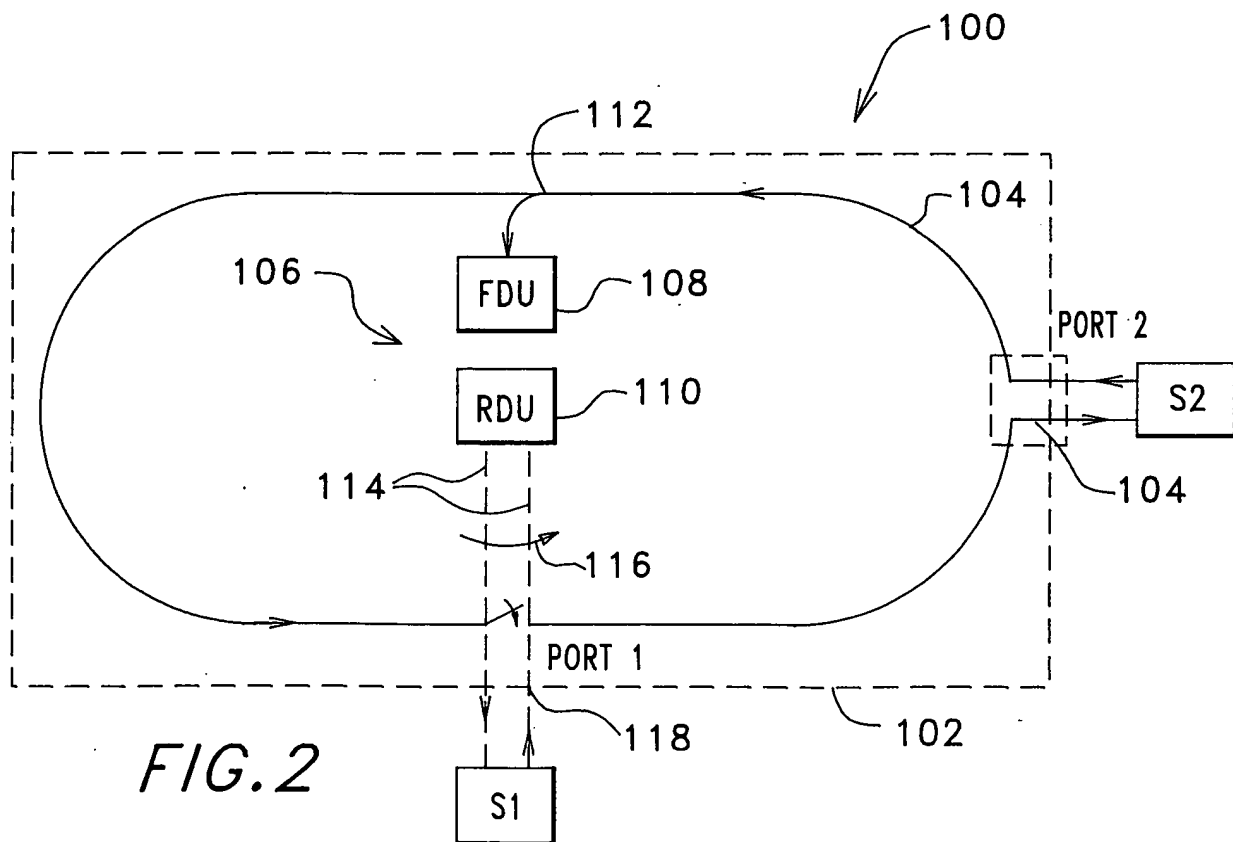


FIG. 2

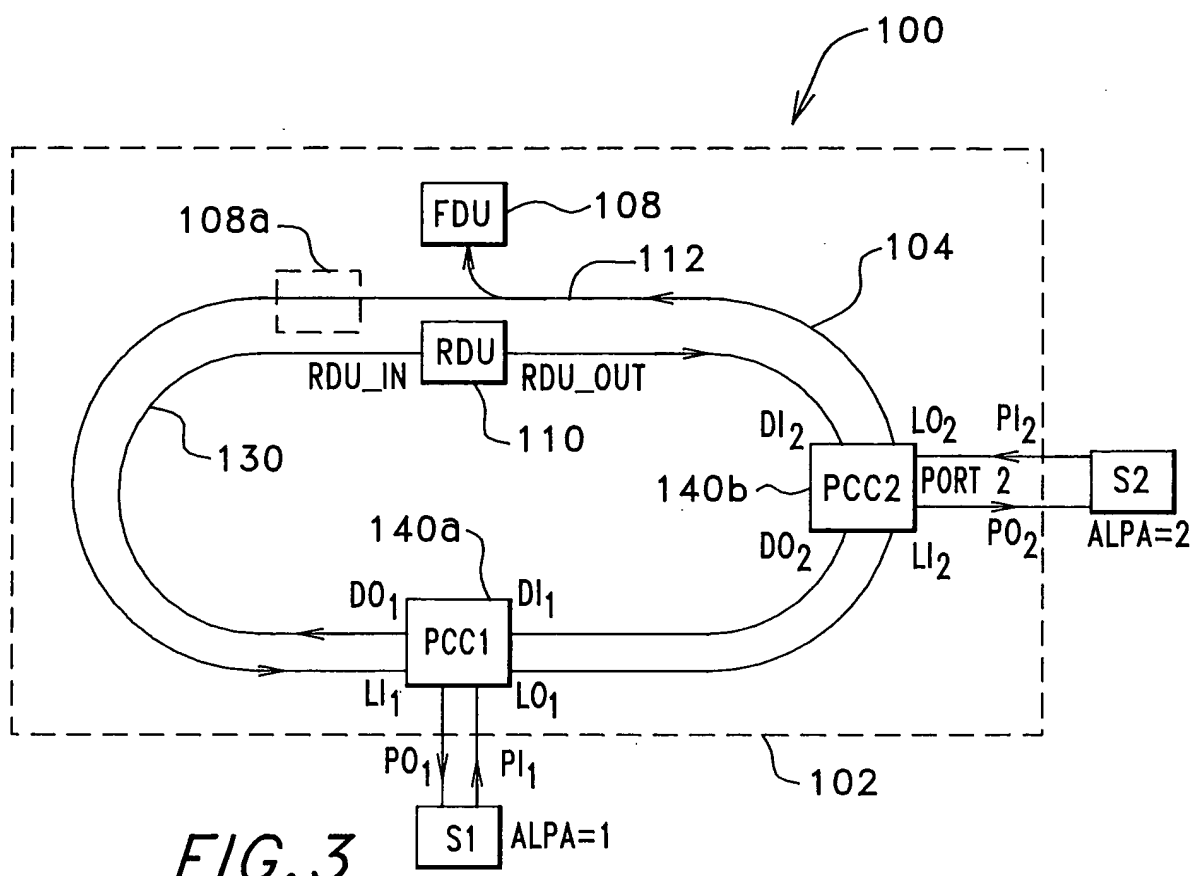


FIG. 3

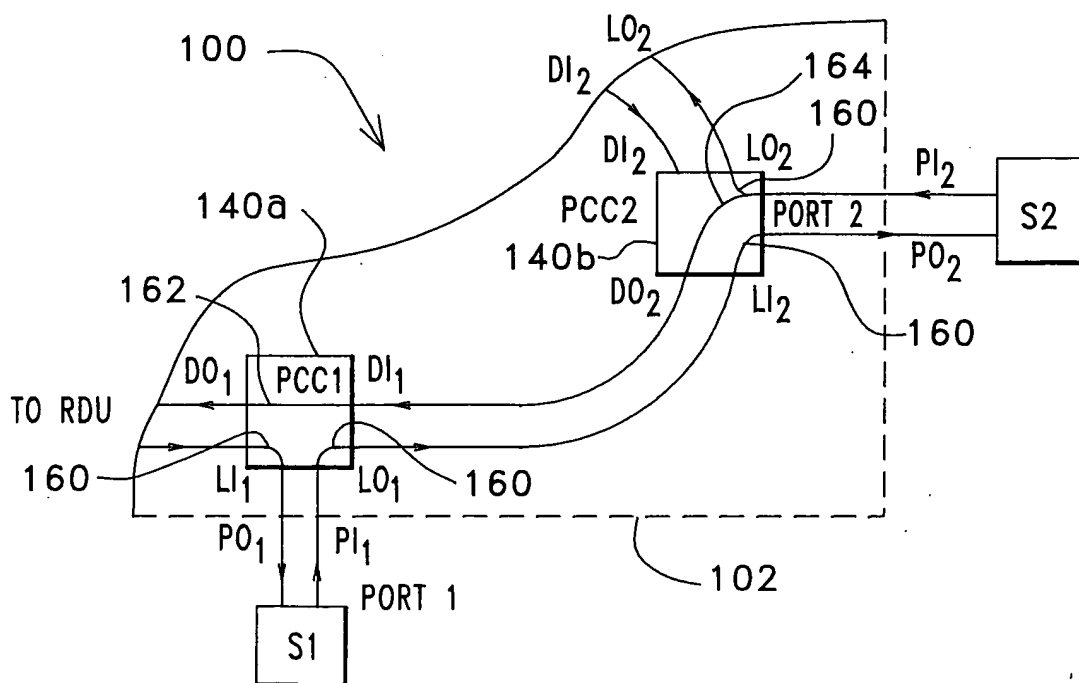


FIG. 5

3/22

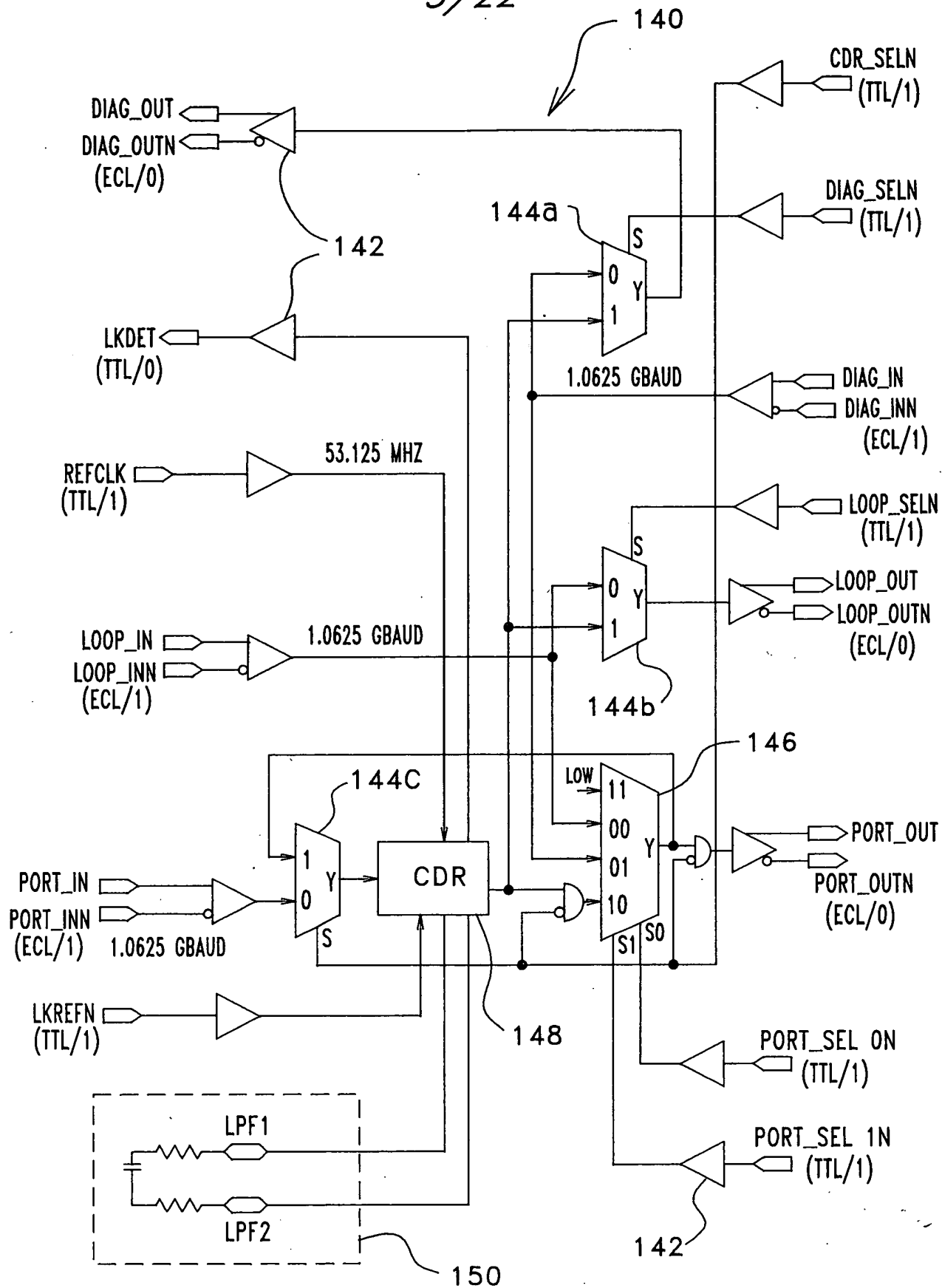


FIG. 4

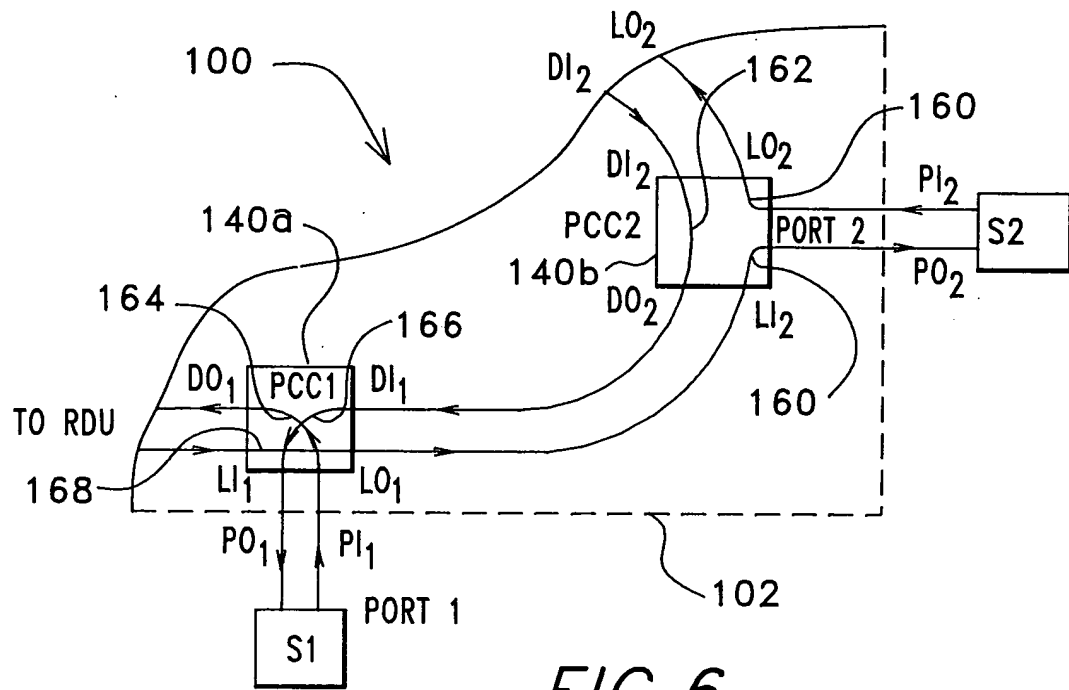


FIG. 6

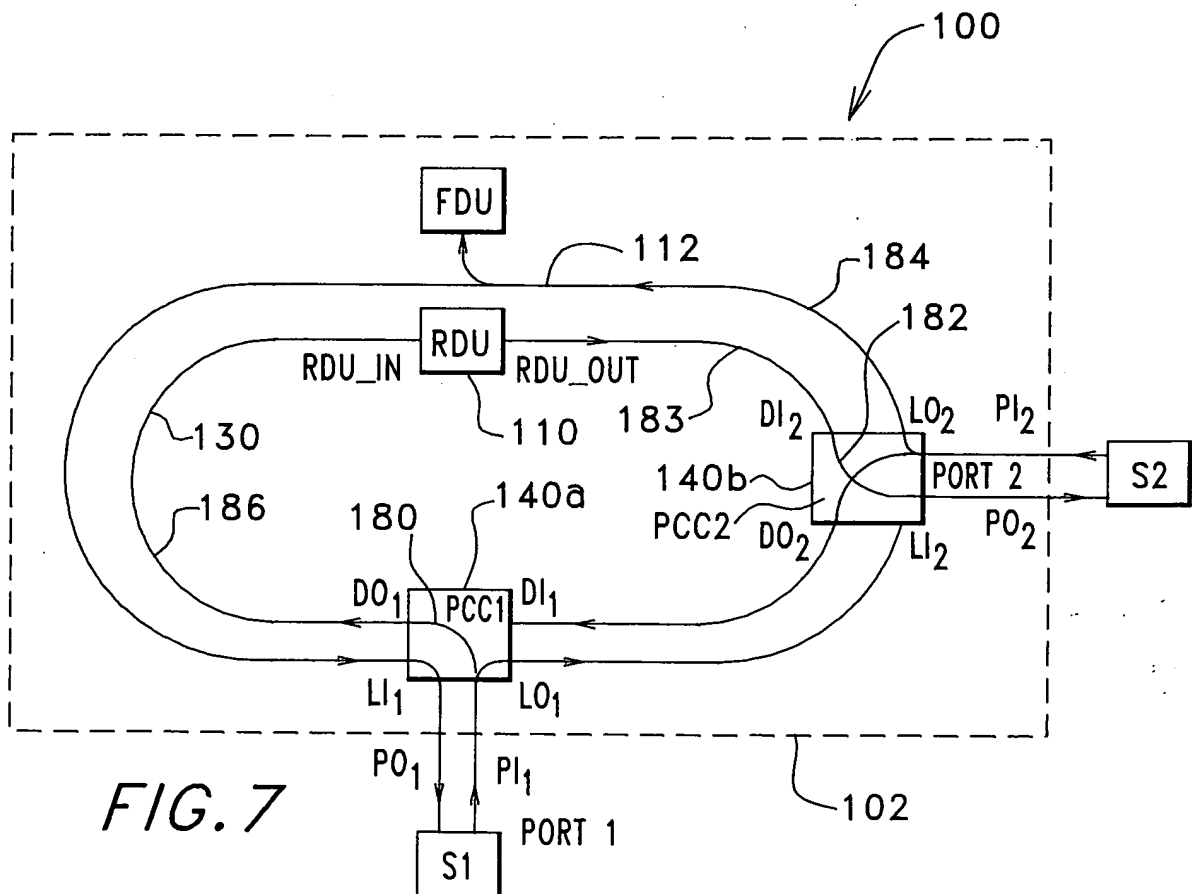


FIG. 7

5/22

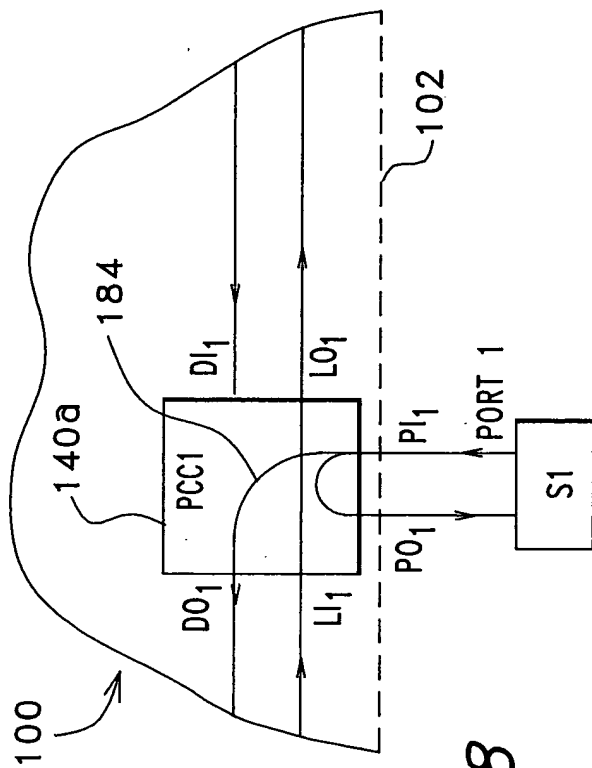


FIG. 8

234 200 236 238

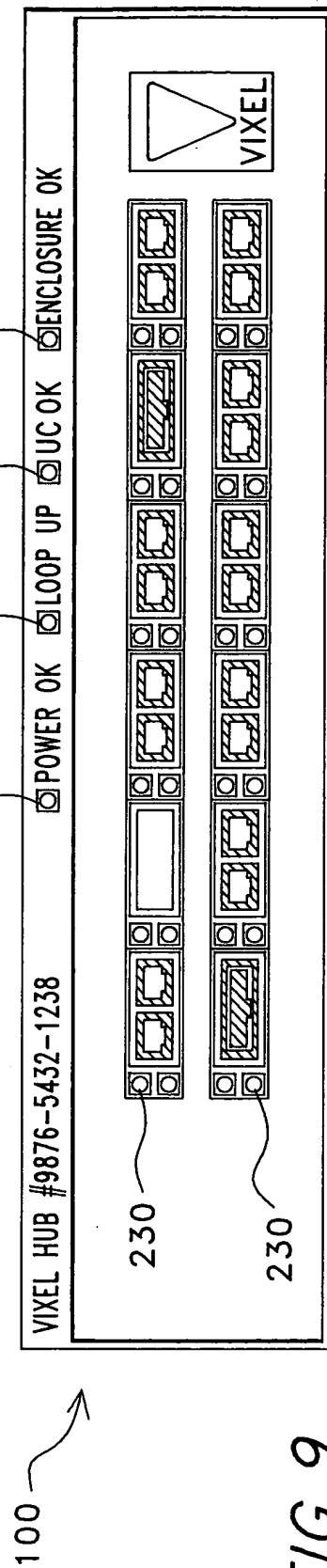
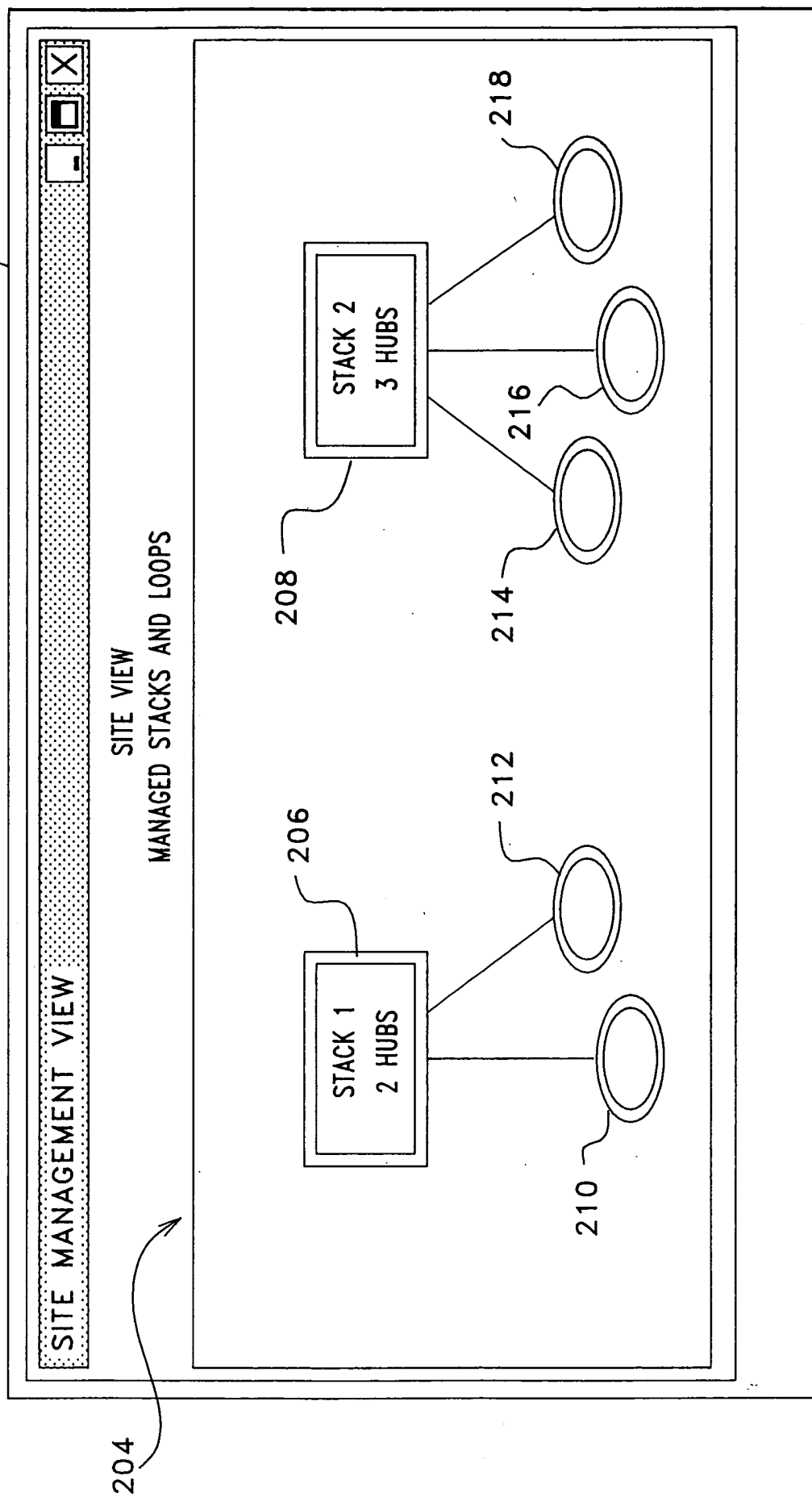


FIG. 9

+

6/22

202



204

SITE VIEW

MANAGED STACKS AND LOOPS

206

STACK 1
2 HUBS

210

212

208

STACK 2
3 HUBS

214

216

218

FIG. 10

+

220 7/22 214

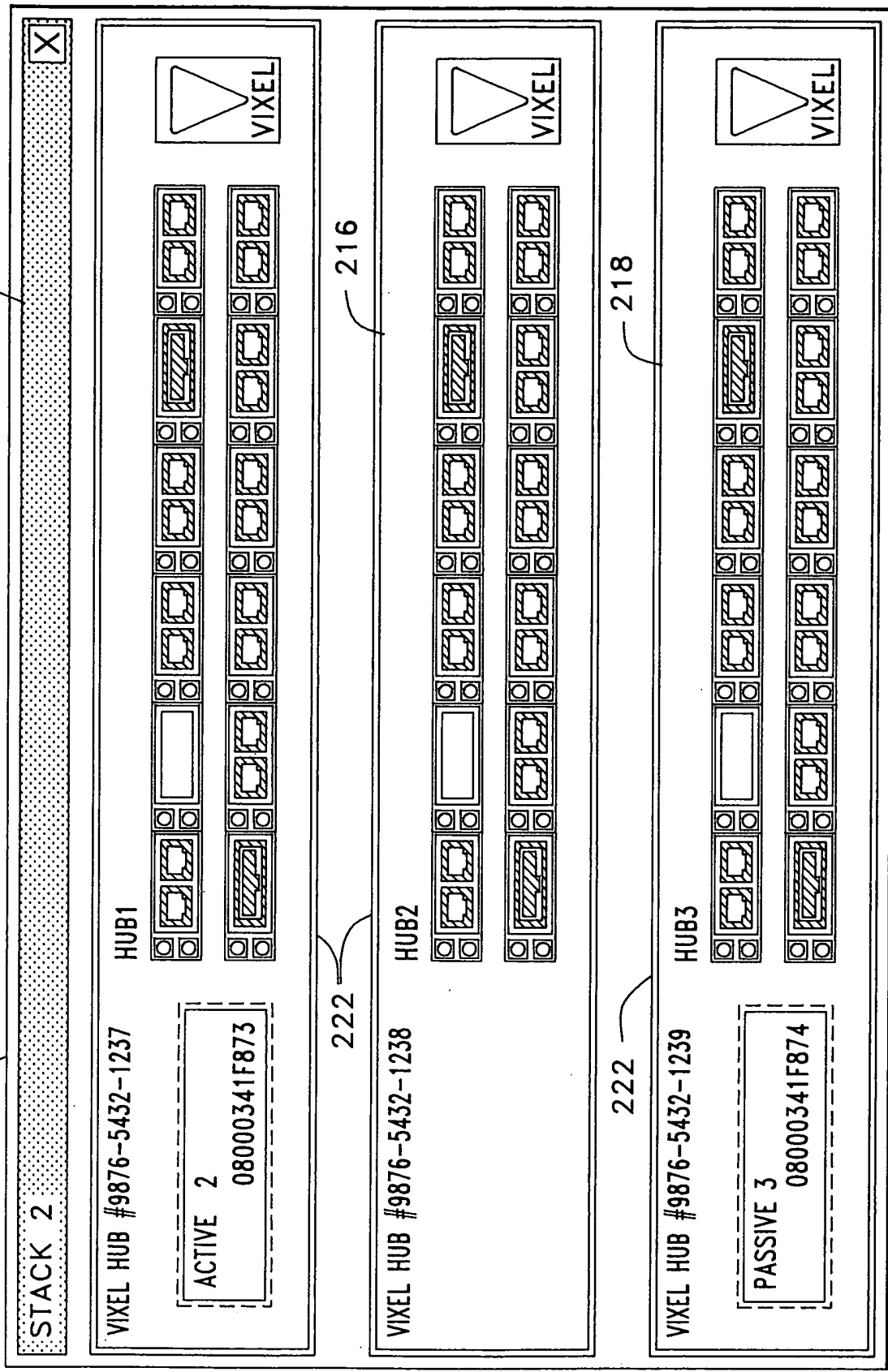


FIG. 11

202

8/22

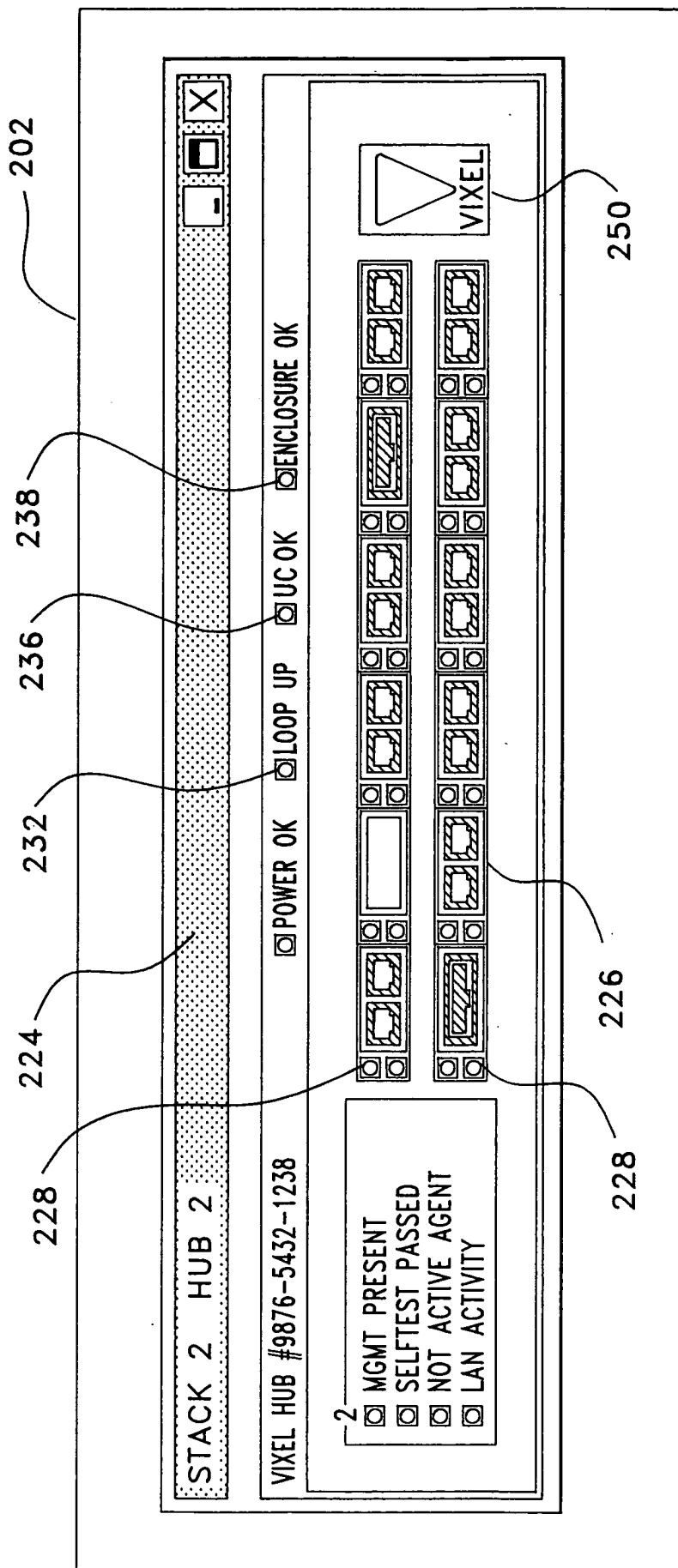


FIG. 12

10/22

202

VIXEL DIAGNOSTIC AND POLICIES: 38.244.18.62-03001067

X

PORT

HUB

LOOP

POLICIES

AGENT

SWEEP

PORT DETECTION

1

2

3

4

5

6

7

8

9

10

11

12

PLL LOCK

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

PLL LOCK

LINK USABLE

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

LINK USABLE

LIP [3X]

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

LIP [3X]

LIP[F7] [3X]

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

LIP[F7] [3X]

LIP[F8] [3X]

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

LIP[F8] [3X]

OPN

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

OPN

ARB

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

ARB

IDLE [3X]

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

IDLE [3X]

SOF

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

SOF

MATCH

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

MATCH

OTHER OS

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

OTHER OS

PORT DETECTION

1

2

3

4

5

6

7

8

9

10

11

12

PLL LOCK

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

PLL LOCK

LINK USABLE

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

LINK USABLE

LIP [3X]

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

LIP [3X]

LIP[F7] [3X]

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

LIP[F7] [3X]

LIP[F8] [3X]

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

LIP[F8] [3X]

OPN

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

OPN

ARB

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

ARB

IDLE [3X]

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

IDLE [3X]

SOF

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

SOF

MATCH

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

MATCH

OTHER OS

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

OTHER OS

PORT DETECTION

1

2

3

4

5

6

7

8

9

10

11

12

PLL LOCK

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

PLL LOCK

LINK USABLE

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

LINK USABLE

LIP [3X]

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

LIP [3X]

LIP[F7] [3X]

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

LIP[F7] [3X]

LIP[F8] [3X]

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

LIP[F8] [3X]

OPN

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

OPN

ARB

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

ARB

IDLE [3X]

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

IDLE [3X]

SOF

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

SOF

MATCH

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

MATCH

OTHER OS

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

OTHER OS

DETECT

ARB(F0)

K28.5

20.4

16.7

16.7

☒ MATCH SIG[1X]
☐ MATCH SEQ[3X]

UPDATE INTERVAL:

4000

MS

PORT DETECT FOR:

300

MS

FIG. 14

11/22

202

HARDWARE DEBUG

PORTS

HUB

LOOP

STACK

AGENT

DETECT

290

SELECT PORT NUM

☐ 1

☐ 2

☐ 3

☐ 4

☐ 5

☐ 6

☐ 7

☐ 8

☐ 9

☐ 10

☐ 11

☐ 12

292

TRANSMITTER

☐ ON

☐ OFF

RECEIVER

288

PORT DIAGNOSTIC CONTROL

☐ MOVE DIAG

☒ CURRENT PORT

☐ MATCH:
OR

☐ K28.5

☐ TRANSMIT:
OR

☐ K28.5

☐ K28.5

☐ SEND WHILE CKD

☐ COUNT WHILE CHECKED:

☐ DETECTED:

☐ K28.5

☐ DETECT WHILE CKD

☐ 0

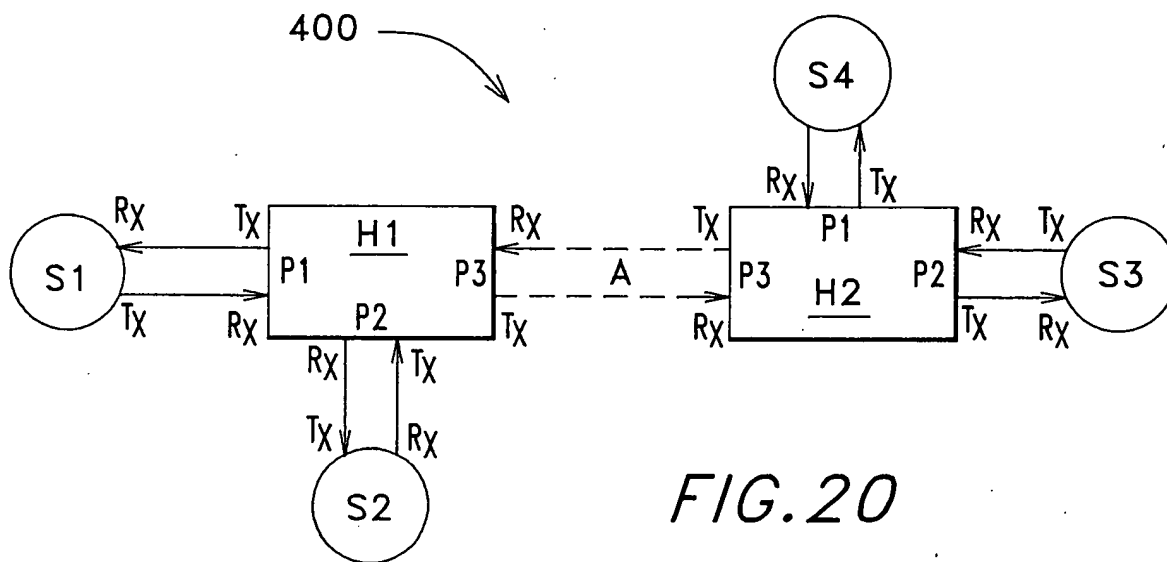
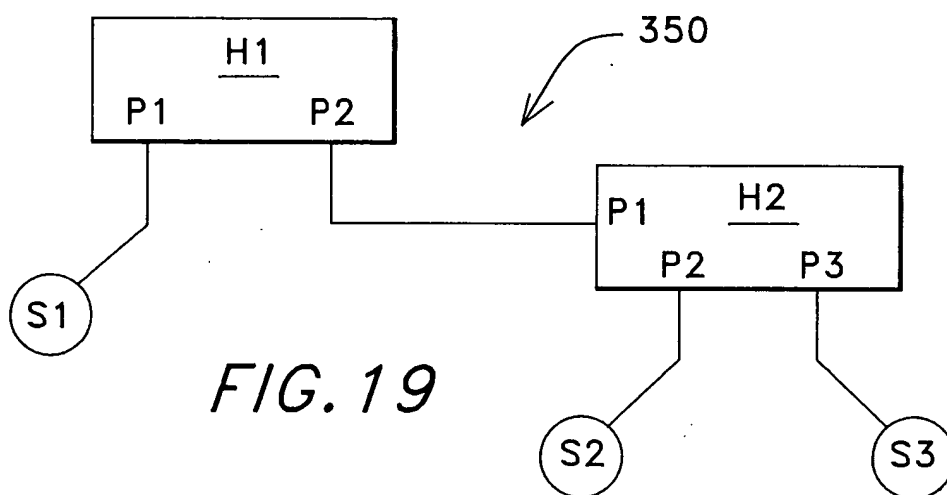
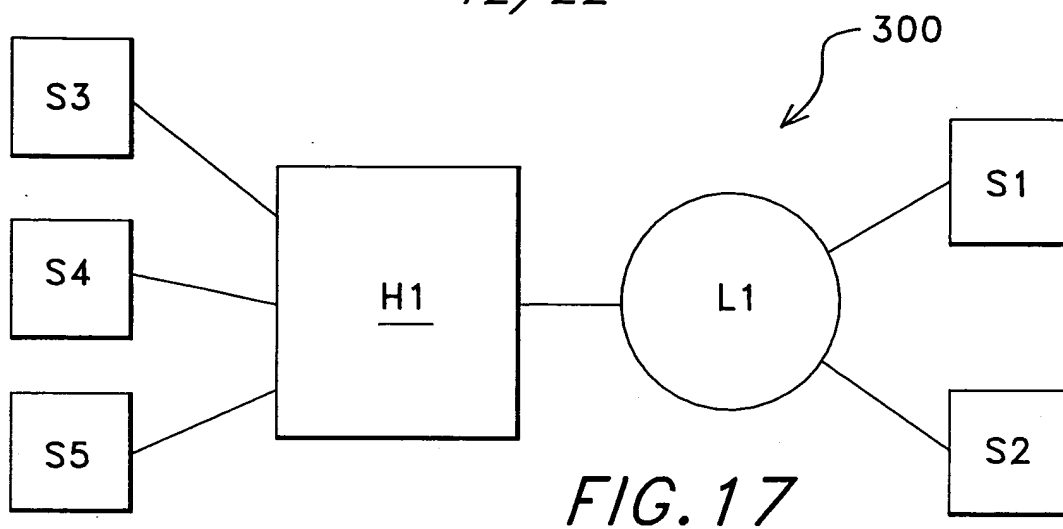
DETECTED LIST

286

FIG. 15

+

12/22



+

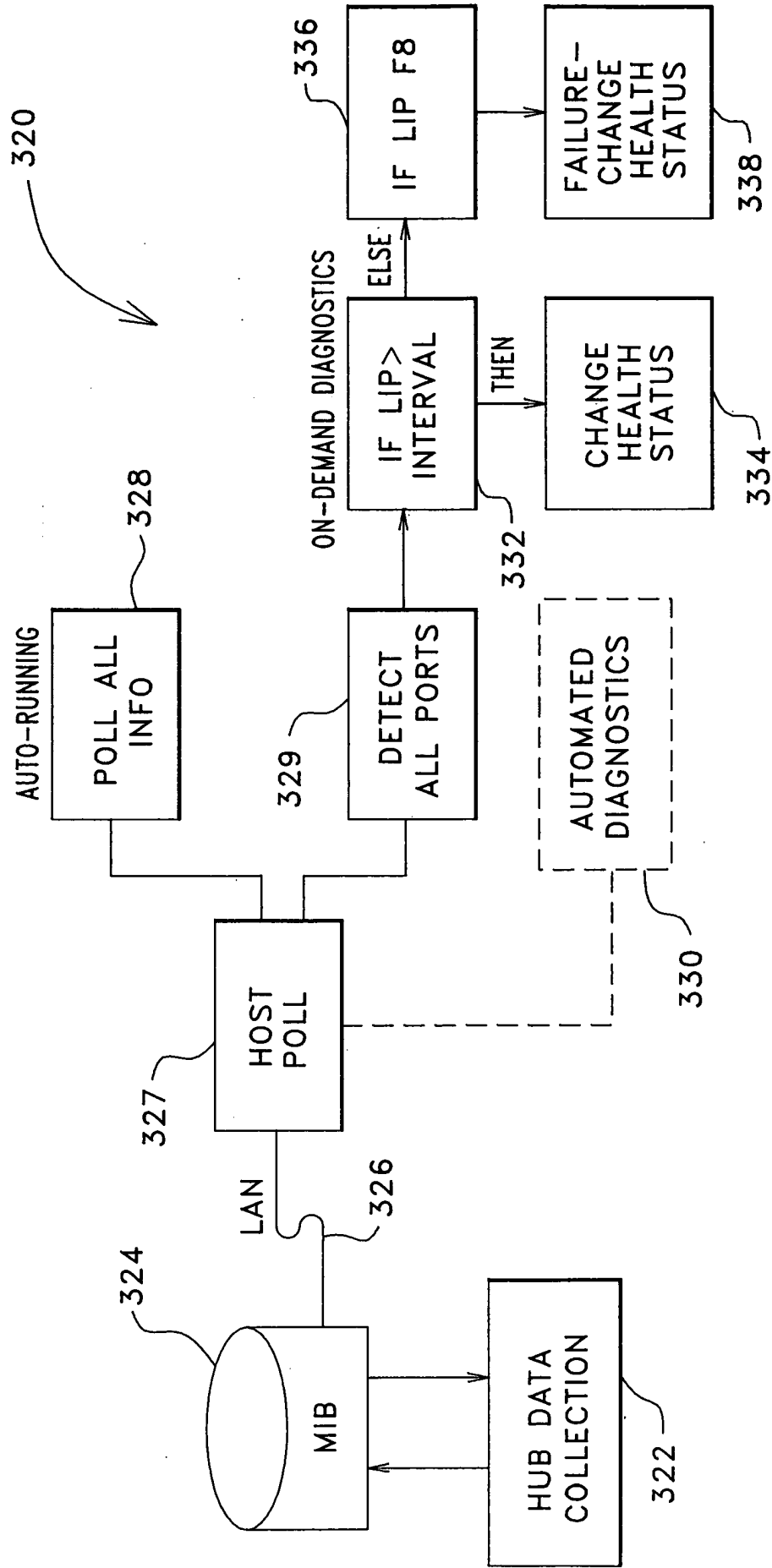


FIG. 18

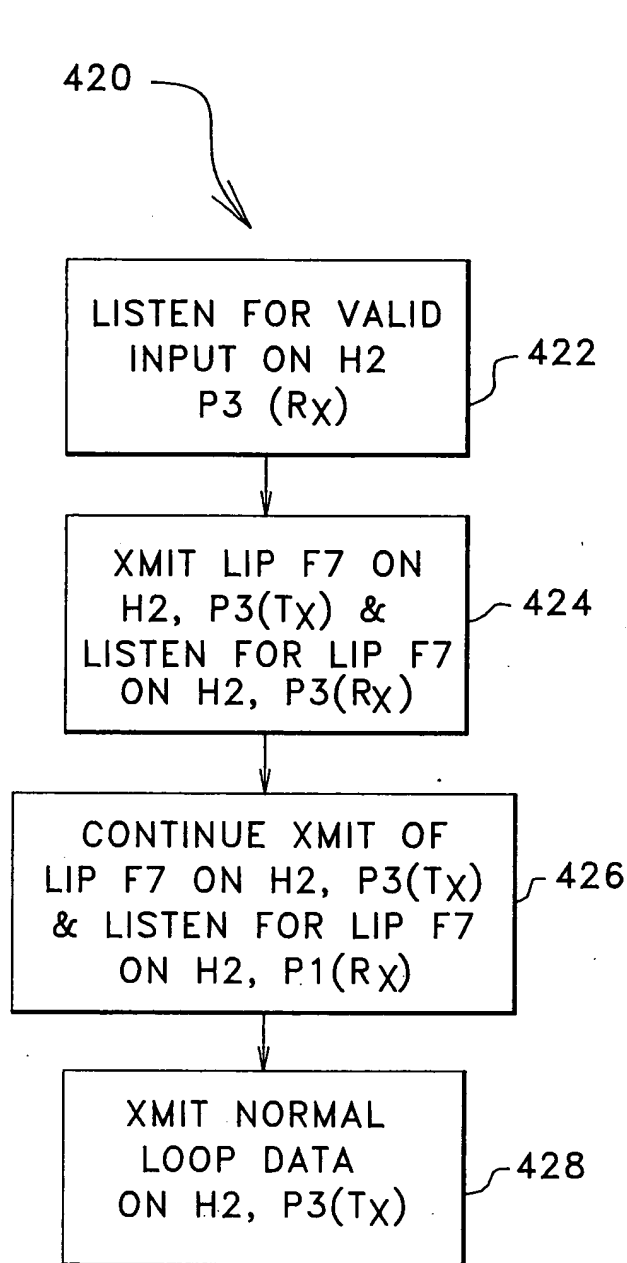


FIG.21

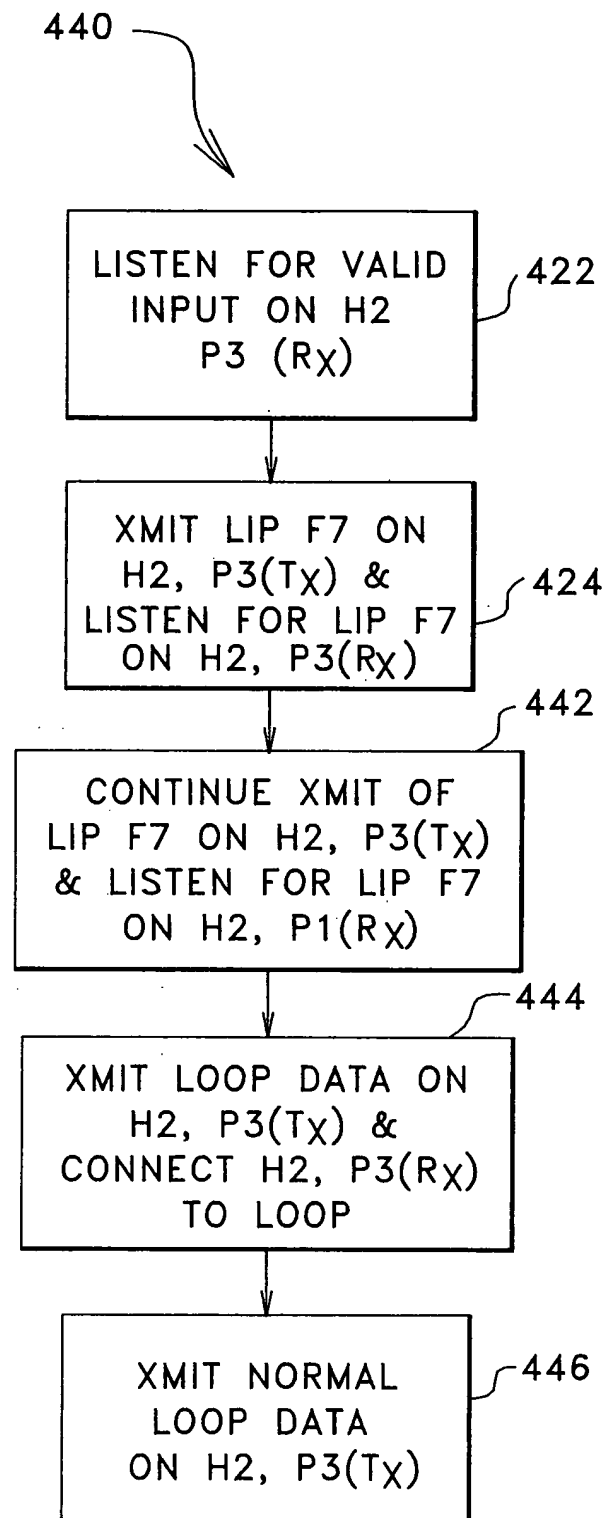


FIG.22

15/22

REFCLK	1	30	CDR_SELN
LKDT	2	29	DIAG_SELN
VEET	3	28	LOOP_SELN
DIAG_OUT	4	27	DIAG_IN
DIAG_OUTN	5	26	DIAG_INN
VCCE	6	25	VCCG
LOOP_IN	7	24	LOOP_OUT
LOOP_INN	8	23	LOOP_OUTN
VEEG	9	22	VCCE
PORT_IN	10	21	PORT_OUT
PORT_INN	11	20	PORT_OUTN
LKREFN	12	19	VEEE
VEEP	13	18	PORT_SELON
LPF1	14	17	PORT_SEL1N
LPF2	15	16	VCCP

FIG.23

460



500

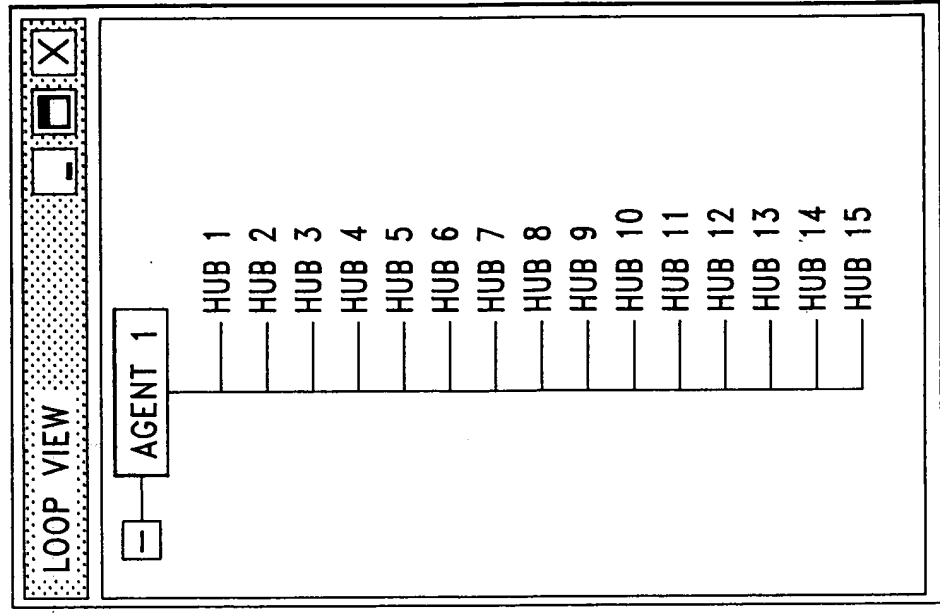


FIG.25

16/22

480

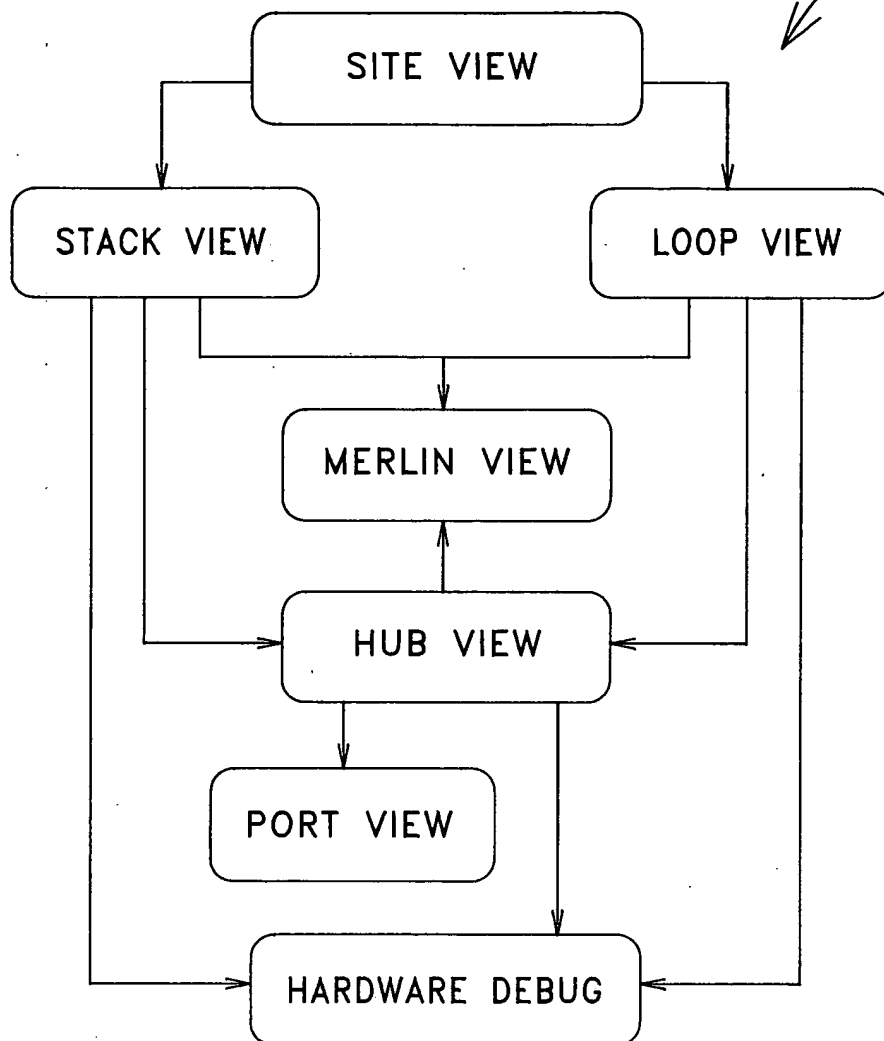
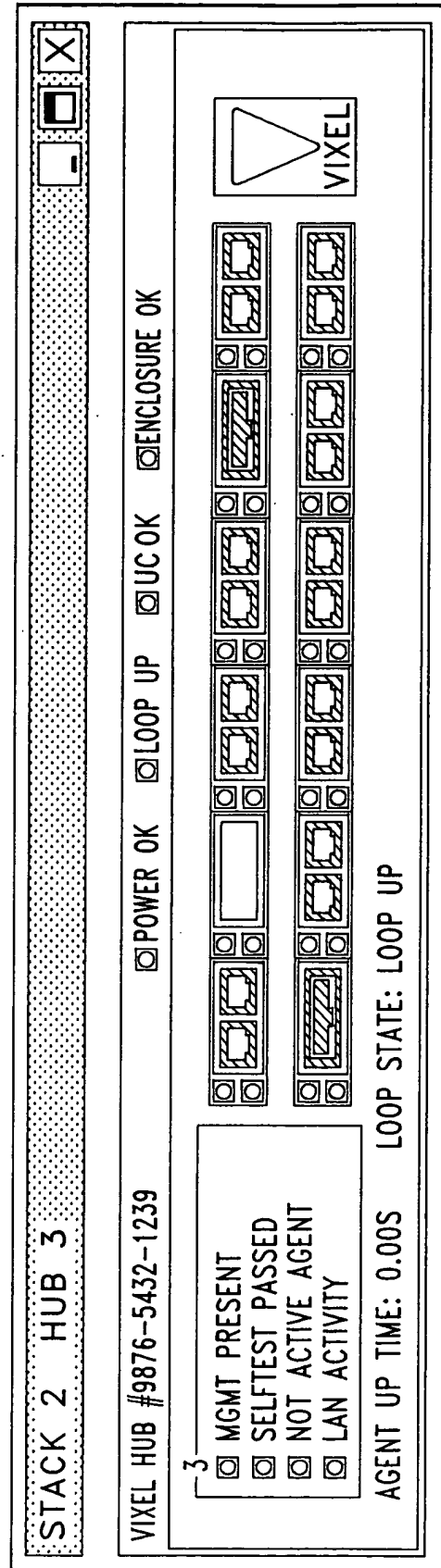
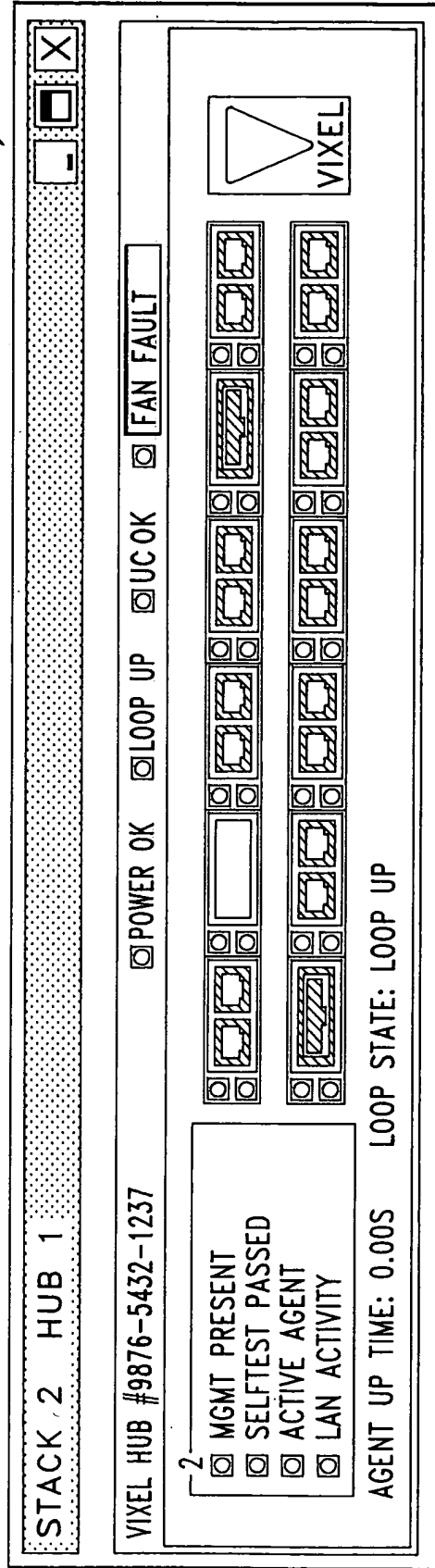


FIG.24

560

MERLIN MANAGEMENT CARD STATUS SCREEN			
SERIAL#:	02-00197-0002	ACTIVE:	YES
HW REVISION:	01.01	SW REVISION:	01.01
LOCATION:	<u>BLDG 54</u>	NAME:	<u>MERLIN 1</u>
IP ADDRESS:	<u>24.34.233.148</u>	MAC ADDRESS:	080009123456
PRIORITY:	<u>7</u>	FORCE ACTIVE	
MGMT PASSWORD <u>*****</u>			

FIG.28



18/22

580

HARDWARE DEBUG

PORTS

HUB

LOOP

STACK

AGENT

DETECT

SELECT PORT NUM

☐ 1

☐ 2

☐ 3

☐ 4

☐ 5

☐ 6

☐ 7

☐ 8

☐ 9

☐ 10

☐ 11

☐ 12

TRANSMITTER

☐ ON

☐ OFF

RECEIVER

PORT DIAGNOSTIC CONTROL

☐ MOVE DIAG

☐ CURRENT PORT

☐ MATCH:
OR
K28.5

☐

☐

☐

☐ TRANSMIT:
OR
K28.5

☐

☐

☐

MATCH BASED ORDERED SET CAPTURE

☐ K28.5

☐

☐

☐

☐ SEND WHILE CKD

☐ DETECT WHILE CKD

☐ COUNT WHILE CHECKED:

0

DETECTED:

DETECTED LIST

582

FIG. 29

19/22

580

HARDWARE DEBUG

PORTS

HUB

LOOP

STACK

AGENT

DETECT

SELECT PORT NUM

☐ 1

☐ 2

☐ 3

☐ 4

☐ 5

☐ 6

☐ 7

☐ 8

☐ 9

☐ 10

☐ 11

☐ 12

☐ 13

☐ 14

☐ 15

☐ 16

RESET PORTS

RESET 12C

HUB SELECTED: HUB SN

HUB DIAGNOSTICS

☐ MATCH:
OR
☐ K28.5

☐

☐

☐

☐

☐

☐

☐

☐

☐

MATCH BASED ORDERED SET CAPTURE

☐ K28.5

☐ DETECT WHILE CHECKED

☐ COUNT WHILE CHECKED: 0

DETECTED: NONE

582

FIG.30

20/22

586

580

☐

HARDWARE DEBUG

☐

☐

☐

☐

PORTS

HUB

LOOP

STACK

AGENT

DETECT

STATUS: LOOP UP

ALPA(S)

USE

☐ OPNS

☐ ARB S

FROM

☐ ALPAS FROM PORT:

☐ HUB ALPAS

☐ COLLECT WHILE CHECKED

TRAFFIC

☐

RESET LOOP

FIG.31

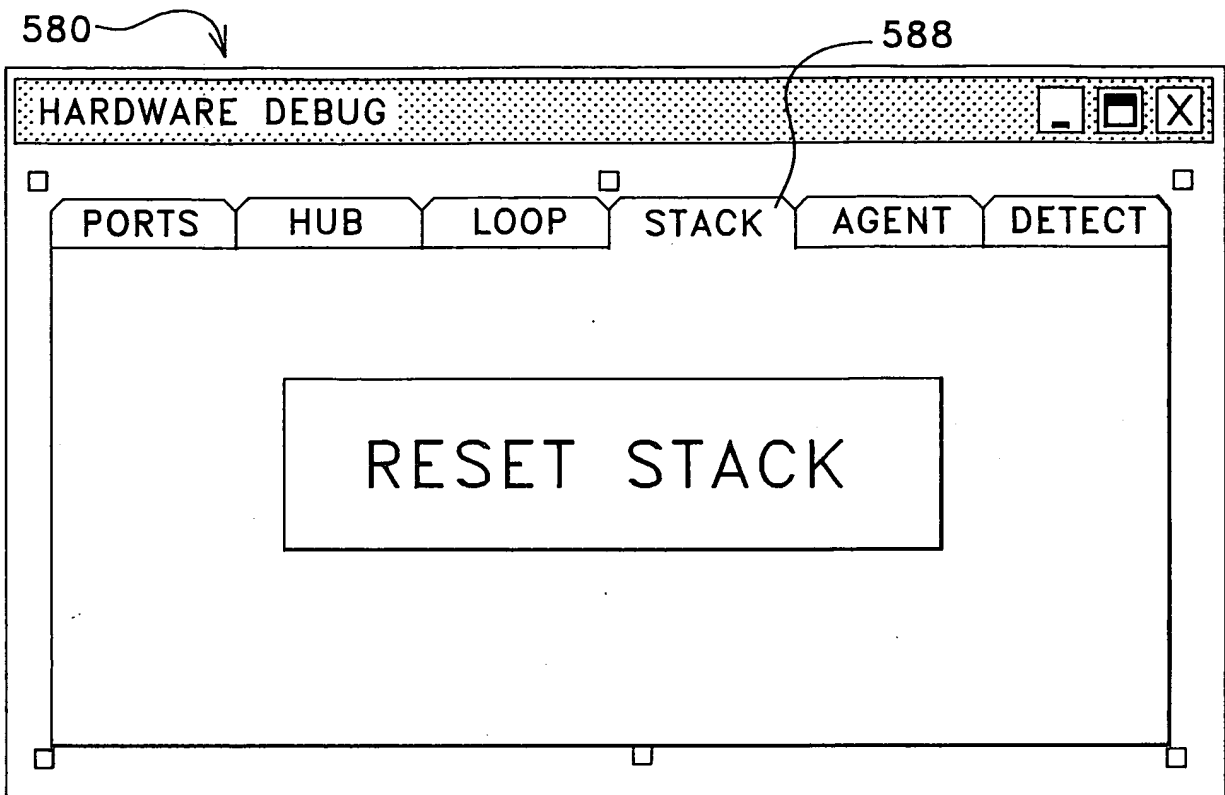


FIG. 32

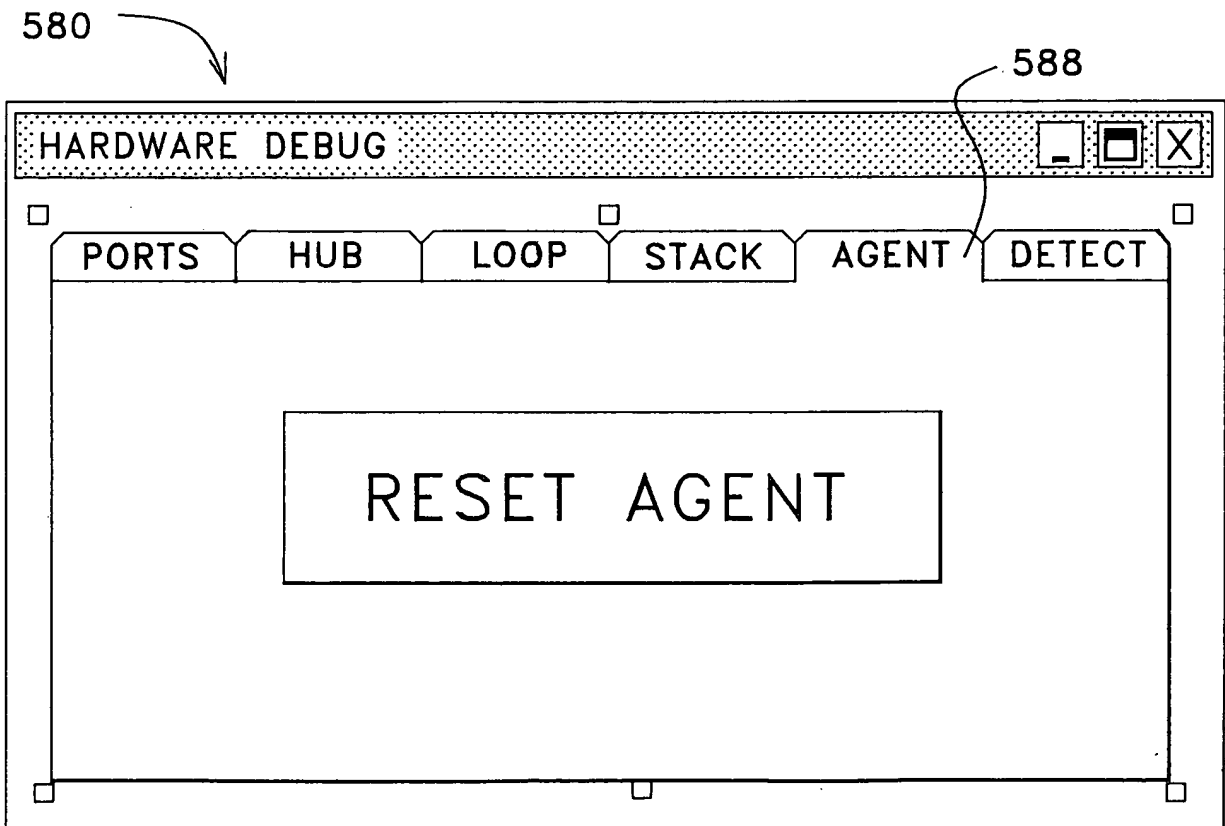


FIG. 33

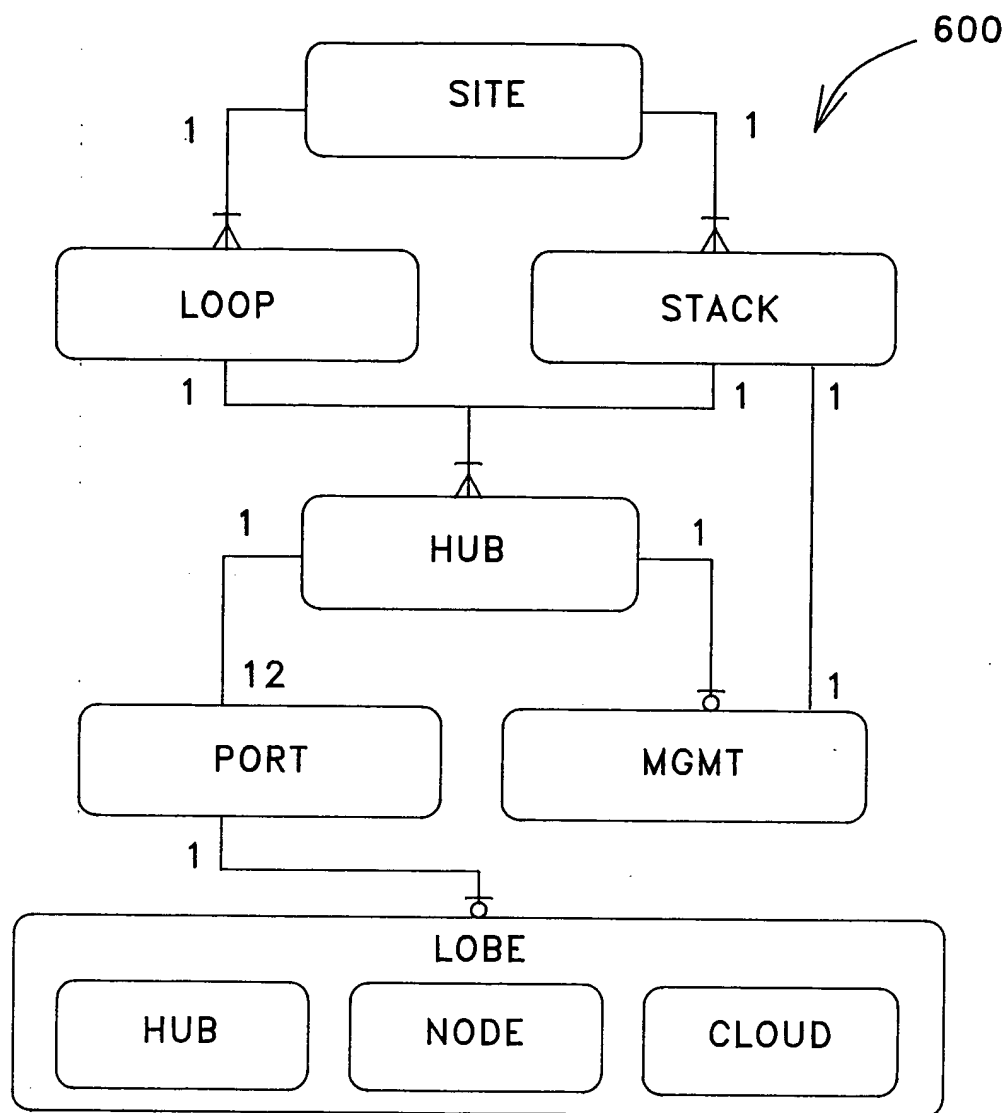


FIG. 34